



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

OCT 18 2001

DOT-E 12303
(FIRST REVISION)

EXPIRATION DATE: September 30, 2003

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Halliburton Energy Services
Duncan, OK
2. PURPOSE AND LIMITATION:
 - a. This exemption authorizes the transportation in commerce of certain Division 2.1, 2.2 and Class 3 materials in a non-DOT specification cylinder used for oil well sampling. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.
 - c. This exemption serves as a Competent Authority Approval (CA-0001011), issued by the Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration of the United States Department of Transportation, in accordance with Part 1, Chapter 1, paragraph 1.1 of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.34(d) in that a cylinder charged with a compressed gas that is not equipped with a pressure relief device is not authorized except as specified herein; and §173.201, § 173.302, and § 173.304 in that a non-DOT specification cylinder is not authorized except as specified herein.
5. BASIS: This exemption is based on the application of Halliburton Energy Services dated October 1, 2001 submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

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Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Compressed gases, flammable, n.o.s.	2.1	UN1954	N/A
Hydrocarbon gases mixtures, compressed, n.o.s.	2.1	UN1964	N/A
Hydrocarbon gases mixtures, liquefied, n.o.s.	2.1	UN1965	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Petroleum crude oil	3	UN1267	I

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification oil well sampling cylinder, threaded on both ends, with a design pressure of 20,000 psig, and a maximum water capacity of 0.29 gallons (1100 cubic centimeters). Each cylinder must comply with the design calculations, drawings, material specifications, and engineering specifications submitted with Haliburton Energy Services, Inc.'s application for exemption on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA). In addition, each cylinder must conform with §§ 178.35 and 178.36 except as follows:

§ 178.35(e) *Safety devices.*

No pressure relief device is required on the completed cylinder. The cylinder must be equipped with elastomeric seals that relieve pressure when subjected to a pool fire.

§ 178.35(f) *Marking.*

Applies except that cylinders must be marked "DOT-E 12303" in lieu of the DOT specification marking. The marking must be clearly visible and no less than 1/8 inches high.

§ 178.36(b) *Steel.*

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Inconel Alloy 718 (UNS N07718) must meet the requirements of Halliburton specification 770.10907. Material must meet the requirements of the National Association of Corrosion Engineers (NACE) Specification MR-01-75 for suitability in hydrogen sulfide (H₂S) service.

§ 178.36(f) *Wall thickness.*

Minimum wall thickness may not be less than 0.325 inch. In no instance may the wall stress at the minimum specified test pressure exceed 67% of the minimum tensile strength of the material as determined from the reported physical test results.

§ 178.36(g) *Heat treatment.*

No heat treatment required for the completed cylinder. However, the heat treatment of the purchased stock material must conform to the Halliburton Technology Specification 770.10907 as applicable on file with OHMEA.

§ 178.36(j) *Flattening test.*

No flattening test is required.

§ 178.36(l) *Acceptable results for physical tests.*

- (1) For Inconel bar stock:

Minimum Tensile strength:	170,000 psi
Minimum Yield strength:	125,000 psi
Elongation:	20% on 1 inch gage specimen or in 4D
Reduction in area:	25 minimum
Hardness:	40 Rc Maximum (363HB)
- (2) Yield strength must be determined by the "offset" method as prescribed in ASTM Standard E8. Cross-head speed of the testing machine may not exceed 1/8 inch per minute during yield strength determination.

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b. TESTING - Each cylinder must be reinspected and hydrostatically retested in accordance with § 173.34 as prescribed for DOT 3A specification cylinders. Reheat treatment or repair of rejected cylinders is not permitted.

c. OPERATIONAL CONTROLS -

(1) Each cylinder must be packed in the transportation box as specified in the application for exemption on file with the OHMEA.

(2) Emergency response information provided with the shipment, and available via an emergency response telephone number, must indicate that the receptacles are not fitted with pressure relief devices and provide appropriate guidance in case receptacles are exposed to fire.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the HMR.

b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

c. The cylinders are authorized for oil well sampling service only.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo aircraft only.

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel or aircraft used to transport packages covered by this exemption. The shipper must furnish a current copy of this exemption to the air carrier before or at the time the shipment is tendered.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

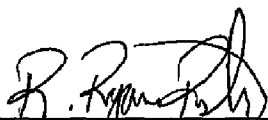
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:



for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

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The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

Copies of exemptions may be obtained from the AAHMS, U.S. Department of Transportation, 400 7th Street, S.W., Washington, DC 20590-0001, Attention: Records Center, 202-366-5046.

PO: S.Staniszewski/sln